## **Claims:**

- 1. Composition comprising at least one HDAC inhibitor in combination with a retinoid and a cosmetically or pharmaceutically acceptable excipient or diluent.
- 2. Composition according to claim 1, wherein the HDAC inhibitor is a compound of the formula

wherein

R is hydrogen or a  $C_1$ - $C_{30}$  hydrocarbon residue and n is an integer of 1 to 5.

- 3. Composition according to claim 2, wherein R is hydrogen, a  $C_4$ - $C_{20}$  alkyl group or a  $C_4$ - $C_{20}$  alkenyl group.
- 4. Composition according to any of claims 1 to 3, wherein the retinoid is a compound of the formula

wherein  $R^6$  and  $R^7$  are independently of each other hydrogen or hydroxy or  $R^6$  and  $R^7$  together form an oxygen atom

R<sup>8</sup> and R<sup>9</sup> are hydrogen or R<sup>8</sup> and R<sup>9</sup> together form an oxygen atom

R<sup>10</sup> is hydrogen, hydroxy or a residue OR<sup>11</sup>

 $R^{11}$  is  $C_1$ - $C_{20}$  alkyl (preferably  $C_1$ - $C_6$  alkyl),  $C_2$ - $C_{20}$  alkenyl (preferably  $C_2$ - $C_6$  alkenyl),  $C_6$ - $C_{20}$  aryl,  $C_7$ - $C_{20}$  alkylaryl or a residue -C(O)- $R^{12}$ 

 $R^{12}$  is  $C_1$ - $C_{20}$  alkyl (preferably  $C_1$ - $C_6$  alkyl) or  $C_2$ - $C_{20}$  alkenyl (preferably  $C_2$ - $C_6$  alkenyl).

- 5. Composition according to any of claims 1 to 4, which is a topical composition.
- 6. Composition according to any of claims 1 to 5, wherein the composition contains the HDAC inhibitor in a concentration of 0.001 to 50 wt.-%, based on the weight of the composition.
- 7. Composition according to claim 6, wherein the HDAC inhibitor is present in a concentration of 0.01 to 1 wt.-%, based on the weight of the composition.
- 8. Composition according to any of claims 1 to 7, wherein the retinoid is present in a concentration of 0.001 to 50 wt.-%, based on the weight of the composition.
- 9. Composition according to claim 8, wherein the retinoid is present in a concentration of 0.1 to 15 wt.-%, based on the weight of the composition.
- 10. Composition according to any of claims 1 to 9, wherein the ratio of the HDAC inhibitor to the retinoid is from 30:1 to 1:30, based on the weight.
- 11. Composition according to any of claims 1 to 10, which is a cosmetic composition.
- 12. Use of a combination of an HDAC inhibitor and a retinoid for the preparation of a composition for providing a cosmetic effect.
- 13. Use according to claim 12, wherein the cosmetic effect is treatment or prophylaxis of wrinkles or dry skin or sensitive skin or any symptoms caused by negative developments of the physiological homeostasis of healthy skin, promotion of hair growth, protection from hair loss, a thickening of the epidermis, anti-acne, the inhibition of senesence of skin cells, prevention or treatment of photodamage, prevention or treatment of oxidative stress phenomena, prevention or treatment of cellulite, prevention or treatment of pigmentation disorders and/or even the skin tone, prevention and treatment of disturbances in ceramide

and lipid synthesis, prevention of excess sebum production, reduction of activities of matrix metallo proteases or other proteases in the skin, treatment and prevention of inflammatory skin conditions including atopic eczema, polymorphic light eruption, psoriasis, vertiligo, prevention and treatment of itchy or irritated skin.